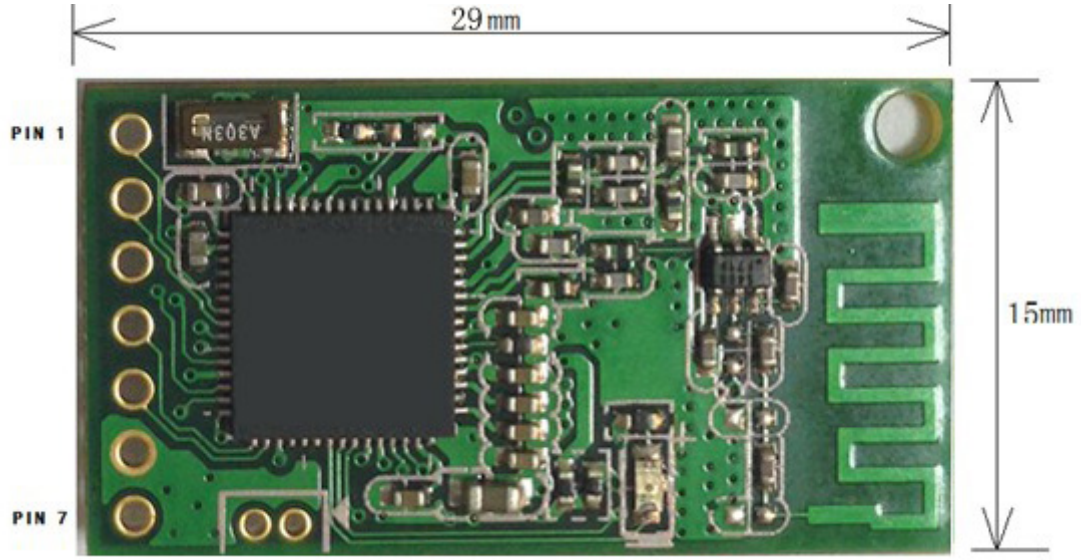
Model Name: XLW-210x

The XLW-210x WiFi module board is a WiFi module board which integrates MCU and 802.11b/g/n 2.4GHz RF transceiver on board with RF circuit having been calibrated, customers can design main board with desired function and interface circuits and assemble it with the XLW-210x WiFi module board, enable simple, easy, and low cost Wi-Fi connection capability.



Key Features

- 2.4GHz, IEEE 802.11b/g/n
- Integrated PCB antenna
- Supports operation in Infrastructure /Ad-Hoc (IBSS)/vitual AP mode ,and IPHONE/ IPAD/Android device can connect it directly.
- Integrated powerful MCU running TCP/IP protocol.
- Supports 1 UART interfaces.
- Supports 3 GPIO interface, max up to 5 GPIOs option (some GPIOs multiplexed with function interfaces above)
- Supports TCP, UDP, ICMP, IGMP, IPv4, DHCP, BOOTP, ARP, DNS, SMTP, SNTP, uPnP, PPPoE and HTTP in software
- Max outdoor rage up to 250meter(820ft), line of sight
- Single operating voltage: 3.3V typical
- Board Size: 15 mm x 29 mm

Applications

- Serial to WiFi
- Intelligent home system

- WiFi Remote Control/Monitor
- Wearable, handheld devices, health/medical care equipment.
- WiFi Toy
- TCP/IP and WLAN Offload Co-processor
- WiFi Internet Radio
- WiFi Network Camera
- WiFi RFID
- M2M Communications

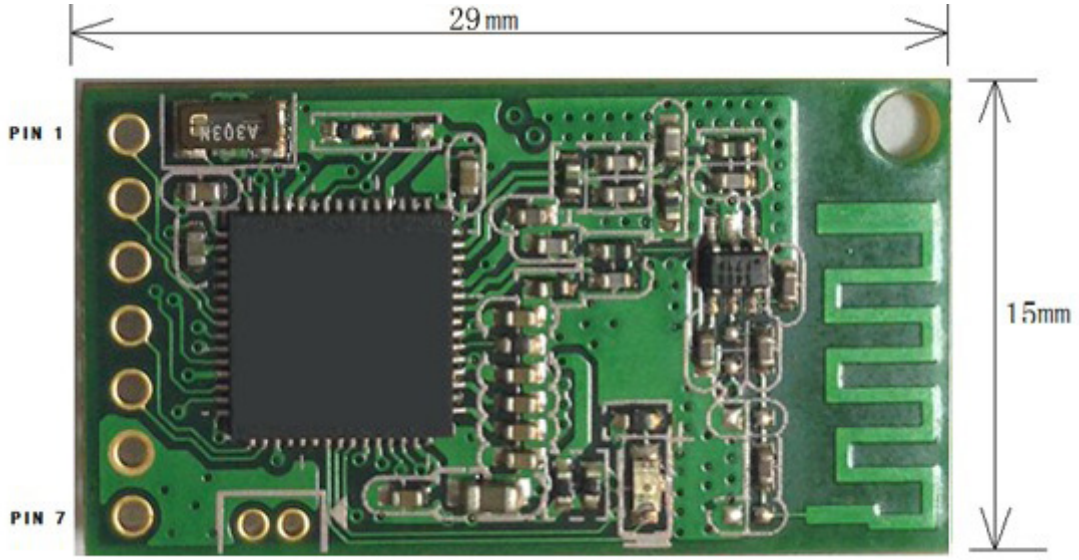
Product Specification

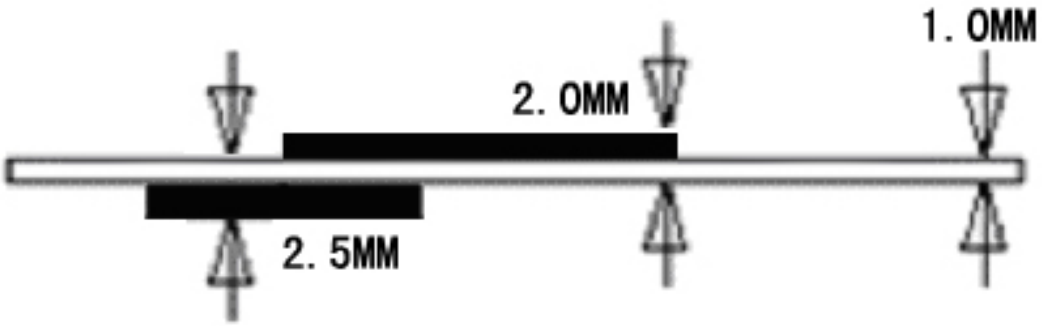
Features		Specifications
RF Transceiver		802.11b/g/n, 2.4Ghz
Code Size		4MB Flash
Data Rate		IEEE 802.11b: 1, 2, 5.5 and 11 Mbps IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps IEEE 802.11n: 6.5M-65Mbps
Radio	Frequency Range	2.412 ~ 2.484 GHz
	Number of Selectable Sub-channels	Up to 14 channels. Profiles available include USA, Canada, Europe, Spain, France, Japan, China, Taiwan and "Other" (multiple countries)
	Modulations	802.11b: DSSS with DBPSK, DQPSK and CCK 802.11g: DSSS with DBPSK, DQPSK and CCK OFDM with BPSK, QPSK, 16QAM and 64QAM
	Antenna	Integrated PCB antenna
RF receiver sensitivity		802.11b 1M bps: -97 dBm 802.11g 54M bps: -15 dBm 802.11n MCS7:-75dBm
RF Maximum Output Power		802.11b: 17dBm 802.11n: 16dBm
Security		802.11i security: WEP-64/128, TKIP (WPA-PSK) and AES (WPA2-PSK)
WiFi Power Saving		Supports 3 WiFi power saving modes in normal operation of Infrastructure mode with auto-wakeup timer for upcoming Beacon frame reception. ● Typical Power Saving Mode ● Fast Power Saving Mode ● Maximum Power Saving Mode
I/O Functions	Function interface	1 UART
	General Purpose I/O	5 GPIOs (some GPIOs multiplexed with function interfaces)
Operating Voltage		3.3V typical
Average Power Consumpti	WLAN mode, data transfer	90mA typical
	STA mode , Shallow	5mA

on	sleep	
	Deep Sleep Mode	10uA（only Wakened by GPIO PIN)
Operating Temperature		-20℃ to +70℃
Board Size		15 mm x 29 mm

Board Dimension

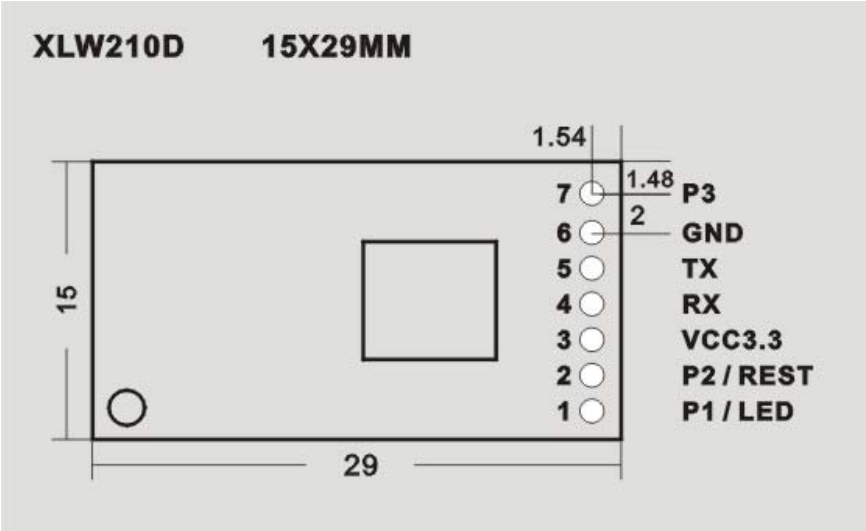
Below shows the XLW-210x wifi module dimension, the connector is male header connector with pin pitch of 2.0 mm. The XLW-210x wifi module have an integrated PCB antenna which requires the host PCB to maintain that area keep-out for best antenna peformance. Also, when mounting on the host PCB of user's system, the module's PCB antenna should be on the edge of host PCB and faced outward.





Connectors and Pin Assignment

Below shows pin define of XLW-210x wifi module. The pin 4 to pin 5 is usually used for Uart to WiFi transfer, and pin 1、2 to pin 7 is usually used for GPIO.



Pin No.	Pin Name	Pin Description
1	P1/LED STATUS	GPIO P1，the default is module LED status light
2	P2 / RESET	GPIO P2，The default is to restore factory setting, active low
3	VCC33	3.3v power supply
4	RXD	UART interface, can reset as GPIO interface
5	TXD	UART interface, can reset as GPIO interface
6	GND	Ground
7	P3	GPIO P3，suspension if not in use

Revision History

Revision	Date	Description
1.0	2012 / 5 / 30	Initial release.

FCC STATEMENT

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.